

REMARKS

Reconsideration of this application is respectfully requested. Claim 1 has been amended to incorporate the features of claim 18, which has been cancelled without prejudice or disclaimer. Claim 29 has been cancelled without prejudice or disclaimer. Claim 11 has been amended to correct dependency. Claims 1, 2, 6, 7, 11-17, 20, 22-25, and 27 have been amended to bring the claim language into conformity with U.S. practice.

Claims 1, 2, 6, 7, and 11-17, and 19-28, and 30-32 are pending. No new matter has been added.

Claim Rejections – 35 U.S.C. § 102

Claims 1, 2, 7, 26 and 32 have been rejected under 35 U.S.C. § 102(b) as anticipated by Tatsuhiko et al. (JP 09-058650). According to the Examiner, Tatsuhiko discloses a paper carton suitable to be filled with liquid contents made of a resin layer and a paper layer, and that adhesives can be used between the layers (*see* Office Action, page 2). The Examiner further contends that Tatsuhiko discloses the same adhesives and paper coatings that are presently claimed. Regarding claim 2, the Examiner contends that Tatsuhiko discloses a single or multi-layer resin layer with adhesives possible between the resin layers. Regarding claim 7, the Examiner contends that Tatsuhiko discloses adhesive layers that comprise ethylene methacrylic acid and maleic anhydride polypropylene. Finally, the Examiner states that Tatsuhiko discloses the use of ethylene as the polyolefin as recited in claim 32.

Applicants traverse the rejection and respectfully request reconsideration.

The pending claims are not anticipated directly or inherently by the cited prior art. In order for a reference to anticipate claims under § 102, the reference must disclose each and every limitation of the claimed invention, and must be an embodiment of the claimed invention. *Dana Corp. v. Am. Axle & Mfg., Inc.*, 61 USPQ2d 1609 (Fed. Cir. 2002). The teaching must *clearly disclose the invention with a certain degree of precision*, without the need for picking and

To reject a claim for obviousness under U.S. law, the Examiner must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art. Additionally, the Patent Office must articulate the reason(s) why a skilled artisan would have recognized that the results of combining the cited prior art would have yielded “nothing more than predictable results” (*see* Examination Guidelines, Department of Commerce, *Federal Register*, 72(195):57529 (October 10, 2007)). Furthermore, for a claim to be obvious, the prior art must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, (Fed. Cir. 1983). Therefore, the cited references, either alone or in combination, should not teach away from the claimed invention. Applicants submit that for at least the following reasons, these requirement to establish obviousness have not been satisfied.

First, as stated above, there is no evidence that Tatsuhiko teaches or suggests a laminate that comprises a denatured polyethylene imine represented by formula I or formula II of claim 1, or that laminates containing polyethylene imine of formula I or formula II would be successful. Accordingly, at least claim 1 is not obvious in view of Tatsuhiko, and claims 6, 17, 30 and 31 depend from claim 1. Akao does not cure this deficiency.

Second, Tatsuhiko discloses a container that includes, in a laminate, a layer of a polyamide resin (comprised of XD-6 structural units) that serves as a barrier resin layer. Examples 1 and 2 of Tatsuhiko disclose laminating, by co-extrusion, a three layered structure comprising a polyamide resin layer comprised of XD-6 structural units/an adhesive layer/a polyethylene layer onto a paper with the polyamide resin layer facing the paper. Example 3 of Tatsuhiko discloses a laminate including a polyamide resin film comprised of XD-6 structural units having polyethylene layers coated on both of its surfaces where the polyethylene layers serve as a sand laminate.

However, the adhesive resin layer used in Examples 1 to 3 of Tatsuhiko is employed to enhance the adhesion of the polyamide resin layer comprised of XD-6 structural units to the polyethylene layer, instead of the adhesion of the resin layer to the paper as in the claimed

invention. Example 2 of Tatsuhiko uses an imine-coated paper to enhance the adhesion of the paper to the polyamide resin layer comprised of XD-6 structural units, which acts as a barrier resin layer.

Accordingly, Tatsuhiko does not teach or suggest, either explicitly or implicitly, a laminate that includes at least an adhesive resin layer/a barrier resin layer/an adhesive resin layer, laminated by co-extrusion, onto a base paper where the base paper has an imine coat on its surface to enhance its adhesion to the adhesive resin layer, and the lamination by co-extrusion set to occur at a temperature as low as 290°C or less. Therefore, a person of ordinary skill in the art would not have relied on Tatsuhiko to arrive at the claimed invention. A skilled artisan also would not have predicted that combining the cited prior art would have yielded “nothing more than predictable results,” i.e., a laminate as presently claimed.

That a skilled artisan would not have relied on Tatsuhiko is supported by the fact that the objects of the claimed laminate and that disclosed in Tatsuhiko are clearly different. Specifically, the laminate disclosed in Tatsuhiko aims to provide a paper container resistant to mechanical deformations, and achieves this object by providing a polyamide resin layer comprised of XD-6 structural units to serve as a barrier layer into a laminate which contributes to the increased rigidity of the paper container in its lengthwise direction. In contrast, the object of the claimed invention is to provide a laminate that includes a multiple resin layer, laminated by co-extrusion, onto a base paper where the adhesion of the adhesive resin layer to the paper is ensured even though the lamination by co-extrusion occurs at a low temperature so as not to damage the barrier resin layer. The advantage of the claimed laminate is that it results in one with very low odor properties yet maintains a reliable shielding activity. These advantages would not be achieved with the laminate disclosed in Tatsuhiko.

Finally, the polyamide resin layer comprised of XD-6 units disclosed in Tatsuhiko is exposed to air at a higher temperature, and thus will easily degrade as a result of oxidation. In addition, a thin barrier layer such as that disclosed in Tatsuhiko, applied to a base paper, will have an uneven surface due to the roughness of the paper surface. An uneven surface would

impair the shielding of the barrier layer. In this regard, the laminate and its components disclosed in Tatsuhiko teach away from the claimed invention.

In view of the foregoing, the cited references, either alone or in combination, would not have led a person of ordinary skill in the art to arrive at the claimed invention. Therefore, Applicants respectfully request that this rejection be withdrawn.

* * *

Claims 11 and 12 are have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tatsuhiko in view of U.S. Patent No. 5,942,320 ("Miyake"). The Examiner contends that Miyake discloses multilayer barrier composite films with gas barrier properties against water vapor, oxygen, and aromatic components. Therefore, the Examiner concludes that it would have been obvious to combine Tatsuhiko with Miyake based on these properties (*see* Office Action, page 5).

Applicants traverse the rejection and respectfully request reconsideration.

For at least the foregoing reasons, claim 1 is not obvious in view of Tatsuhiko because it fails to teach or suggest a laminate that includes a denatured polyethylene imine represented by formula I or formula II. Tatsuhiko also does not teach or suggest a laminate that includes at least an adhesive resin layer/a barrier resin layer/an adhesive resin layer, laminated by co-extrusion, onto a base paper where the base paper has an imine coat on its surface to enhance its adhesion to the adhesive resin layer, and the lamination by co-extrusion set to occur at a temperature as low as 290°C or less. Miyake does not cure these deficiencies. Since claims 11 and 12 depend from claim 1, which is not obvious in view of the cited references, this rejection should also be withdrawn.

* * *

CONCLUSION

It is respectfully submitted that each of the presently pending claims is in condition for allowance and notification to that effect is earnestly requested.

The Examiner is invited to contact the Applicants' representative at the below-listed telephone number if it is believed that the prosecution of this application may be assisted thereby.

Dated: July 10, 2008

Respectfully submitted,

By _____/Thomas H. Burrows Jr./_____
Thomas H. Burrows, Jr.
Registration No.: 60,463
DARBY & DARBY P.C.
P.O. Box 770
Church Street Station
New York, New York 10008-0770
(212) 527-7700
(212) 527-7701 (Fax)
Attorneys/Agents For Applicants